UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
AIR QUALITY

Budget Request to update and replace obsolete air monitoring network equipment and to address new expanded air monitoring capabilities

Introduction

The Governor's 2017 Budget includes a recommendation for $2,160,000 in one-time and $424,200 in ongoing appropriations for the Utah Department of Environmental Quality, Division of Air Quality (DAQ) to provide accurate, timely and quality assured air monitoring information.

Description of Need

Approximately 10 million air monitoring data points are collected by 196 monitors at 23 sites operating in the state annually. DAQ currently has 12 personnel who maintain and operate that equipment statewide and provide maintenance and public announcements 7-days per week. Air monitoring equipment is normally expected to have a useful life of 60-months of use. The instruments are put into service and then operated continuously for 5 years or more before needing to be replaced. To keep the equipment operating as long as possible, DAQ staff makes needed repairs so that most of the equipment continues to function after its useful life. Currently 46% of DAQ's 196 monitoring instruments have exceeded the 5-year mark, some by over 10-years, and are past due for replacement. This percentage grows by 10% each year due to the inability of the current $350,000 in equipment and maintenance budget to meet the required replacement schedule.

Without a systematic replacement schedule that includes having spare sampling equipment on-hand, the time between starting the purchasing process and having an instrument ready to go out in the field is generally 12 – 20 weeks. These monitors are not sitting on a shelf at a store waiting to be bought – each is made to order after the order has been placed. There is a requirement to collect 75% of the possible monitoring data each quarter, or the data for that quarter does not meet data quality requirements. This means that about 23 days per quarter can be missed. Therefore, it is not inconceivable that one such equipment outage could result in two quarters of invalid data, which could have serious ramifications for the state. This information is also not available to inform the public about air quality conditions that can directly impact their health

In addition to addressing the needs of the current air monitoring network, there are new air monitoring requirements that are triggered by growth in population and the desire to have relevant information to inform the public and policy makers about the potential health impacts of air pollutants.

What efforts have been used to improve quality or throughput?

As the population grows and population centers shift, monitoring requirements have changed in Utah. DAQ identified several new monitoring sites that are necessary to meet the federal monitoring requirements or state planning needs. Rather than just establishing new sites, DAQ has consolidated the monitoring network to remove redundant sites, combined equipment into common sites, and removed sites that are no longer needed to meet state needs or minimum federal requirements. For example, DAQ removed the Highland site and has begun the process to remove the North Provo site in Utah County. In Salt Lake County, the Cottonwood and North Salt Lake sites have been removed to offset the installation of new sites at Copperview and Herriman. The Santa Clara site was closed to offset the new Hurricane site. The Washington Blvd site in Ogden was closed. The Logan site will be closed to offset the new Smithfield site. The Tooele and Beach sites were consolidated into a new site at Erda in Tooele County. DAQ also acquired short term funding from BLM to operate additional sites that were required in rural Utah to address the wintertime ozone issues in that area associated with oil/gas development.

How will the funding be used?

The "beyond useful life" air monitoring equipment will be replaced, new air monitoring stations will be established at three near-road segments along the Wasatch Front, and a new population-based Iron County baseline monitoring station will be established. The ongoing funding will provide one new FTE and allow for the support of an equipment replacement schedule.

The total capital equipment and infrastructure cost for this needed expansion is $2,160,000 and the additional FTE requirement of 1 FTE's with an ongoing budget increase of $300,000 annually to cover the operation of these new sites and ongoing equipment replacements and maintenance.

	Description	One time funding	Ongoing Funding
1	Equipment replacement	$1,300,000.00	$300,000.00
2	Near Road Monitoring	$675,000	.75 FTE
3	Iron County Baseline monitoring	$185,000	
4	SO2 rule changes	None	.25 FTE
5	Total FTE increase – 1 FTE		$124,200
total		$2,160,000	$424,200

Are other needs anticipated in the future that will trigger future requests?

The largest identified future need will be in response to EPA's anticipated revision to the monitoring requirements through the designation of non-attainment areas for the 2015 revision to the ground-level ozone standard. Final designations will occur in the fall of 2017. Any non-attainment area designated as Moderate or above will require multi-species organic compound monitoring that will result in the installation of gas-chronographs within each non-attainment area in 2018.